

(PCT Article 36 and Rule 70)

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/014455

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-29 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-43 received by this Authority on 20.10.2005 with letter of 19.10.2005
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|--------------|--------|-------------|-----|--|--------|------------|----|---------------------|--------|--------------|-----|--|--------|-------------|----|-------------------------------|--------|-------------|-----|--|--------|---------|----|
| 1. | Statement <table border="0"><tr><td>Novelty (N)</td><td>Claims</td><td><u>3-43</u></td><td>YES</td></tr><tr><td></td><td>Claims</td><td><u>1-2</u></td><td>NO</td></tr><tr><td>Inventive step (IS)</td><td>Claims</td><td><u>29-43</u></td><td>YES</td></tr><tr><td></td><td>Claims</td><td><u>3-28</u></td><td>NO</td></tr><tr><td>Industrial applicability (IA)</td><td>Claims</td><td><u>1-43</u></td><td>YES</td></tr><tr><td></td><td>Claims</td><td><u></u></td><td>NO</td></tr></table> | Novelty (N) | Claims | <u>3-43</u> | YES | | Claims | <u>1-2</u> | NO | Inventive step (IS) | Claims | <u>29-43</u> | YES | | Claims | <u>3-28</u> | NO | Industrial applicability (IA) | Claims | <u>1-43</u> | YES | | Claims | <u></u> | NO |
| Novelty (N) | Claims | <u>3-43</u> | YES | | | | | | | | | | | | | | | | | | | | | | |
| | Claims | <u>1-2</u> | NO | | | | | | | | | | | | | | | | | | | | | | |
| Inventive step (IS) | Claims | <u>29-43</u> | YES | | | | | | | | | | | | | | | | | | | | | | |
| | Claims | <u>3-28</u> | NO | | | | | | | | | | | | | | | | | | | | | | |
| Industrial applicability (IA) | Claims | <u>1-43</u> | YES | | | | | | | | | | | | | | | | | | | | | | |
| | Claims | <u></u> | NO | | | | | | | | | | | | | | | | | | | | | | |
| 2. | Citations and explanations (Rule 70.7) <p>This report makes reference to the following documents:</p> <p>D1: WO 02/100538 A (BASF AKTIENGESELLSCHAFT; BOETTCHER, ARND; VANOPPEN, DOMINIC; ARNDT, JA) 20 December 2002 (2002-12-19)</p> <p>D4: EP-A-1 270 633 (MITSUBISHI CHEMICAL CORPORATION) 2 January 2003 (2003-01-02)</p> <p>D5 is not cited in the international search report. A copy of the document is appended:</p> <p>D5: US 4455389</p> <p>1. The present application fails to meet the requirements of PCT Article 33(1) for the following reasons:</p> <p>1.1 D1 (page 4, lines 13-35; page 10; lines 39-41; claims 1-4) discloses Ru/SiO₂ catalysts for the hydrogenation of compound II (claim 17) to produce compound I (claim 17). D1 mentions that the SiO₂ substrates can contain MgO or CaO.</p> <p>D4 (paragraphs [0018], [0020], [0031] - [0033], [0046];</p> | | | | | | | | | | | | | | | | | | | | | | | | |

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| | <p>example 7, claims 1, 2, 7, 16 and 18 to 20) discloses Ru/activated carbon catalysts for the hydrogenation of compound II (claim 17) to produce compound I (claim 17). MgO is used for the adsorption of the ruthenium discharged during the reaction (leaching). A person skilled in the art anticipates from D1 the use of SiO₂ with the addition of MgO instead of activated carbon in order to prevent ruthenium from washing out during the reaction.</p> <p>Since it is presently not clear what advantage is gained by impregnating a provisional ruthenium catalyst with magnesium ions instead of using a substrate that already contains MgO, an inventive step cannot be recognized.</p> <p>The subject matter of at least claims 1 and 14 to 28 therefore does not involve an inventive step within the meaning of PCT Article 33(3) in relation to a combination of D4 and D1.</p> <p>1.2 D5 (column 6, lines 10-15) discloses a heterogeneous ruthenium catalyst containing silicon dioxide as a substrate which was impregnated with magnesium ions from a magnesium (II) salt solution prior to the application of ruthenium.</p> <p>The applicant should note that claim 1 defines a product by means of its method of production. Since a product is not automatically novel just because it has been produced by means of a novel method and since nothing can be found in the application which proves that the product according to claim 1 differs from the product of D5, claim 1 cannot be recognized as novel.</p> <p>The present application fails to meet the requirements of PCT Article 33(1) because the subject matter of at least</p> |

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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**claims 1 and 2 is not novel within the meaning of PCT
Article 33(2) .**